

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of operating an Internet Protocol (IP) network comprising a plurality of routers, each router further comprising a plurality of interfaces, the method comprising the steps of:

connecting a spare interface on a first router in the IP network to a re-configurable transport network which provides connectivity to a spare interface on a second router in the IP network upon detection of a pre-designated condition in the IP network; and

~~upon detection of a pre-designated condition in the IP network~~, switching traffic designated for a primary interface at the first router to the spare interface at the first router in the IP network, thereby causing the traffic to flow across a spare capacity on the re-configurable transport network between the spare interface on the first router and the spare interface on the second router in the IP network.

2. (Original) The method of claim 1 wherein the pre-designated condition is a failure in the primary interface at the first router in the IP network.

3. (Currently Amended) The method of claim 2 wherein the primary interface provided connectivity to the re-configurable transport network before said failure and wherein the spare interface provides 1:N interface protection.

4. (Original) The method of claim 2 wherein the primary interface provided connectivity over a direct point-to-point link and wherein the spare interface provides dynamic establishment of a new IP link in response to the failure.

5. (Original) The method of claim 1 wherein the pre-designated condition is a surge in traffic across the primary interface at the first router in the IP network.

6. (Original) The method of claim 1 wherein the re-configurable transport network comprises a plurality of optical cross-connects.
7. (Currently Amended) A device-readable medium storing program instructions for performing a method of operating a router in an Internet Protocol (IP) network, the router further comprising a routing table and a plurality of interfaces including a spare interface providing connectivity through a re-configurable transport network to a spare interface on a second router in the IP network, the method comprising the steps of:
 - receiving a signal indicating a pre-designated condition in the IP network; and
 - connecting said spare interface on said router in the IP network to said re-configurable transport network which provides connectivity to said spare interface on said second router in the IP network upon receiving said signal indicating a pre-designated condition in the IP network; and
 - reconfiguring the routing table in the router so as to switch traffic designated for a primary interface at the router to the spare interface at the router, thereby causing the traffic to flow across a spare capacity on the re-configurable transport network between the spare interface on the router and the spare interface on the second router in the IP network.
8. (Original) The device-readable medium of claim 7 wherein the pre-designated condition is a failure in the primary interface at the first router in the IP network.
9. (Currently Amended) The device-readable medium of claim 8 wherein the primary interface provided connectivity to the re-configurable transport network before said failure and wherein the spare interface provides 1:N interface protection.
10. (Original) The device-readable medium of claim 8 wherein the primary

interface provided connectivity over a direct point-to-point link and wherein the spare interface provides dynamic establishment of a new IP link in response to the failure.

11. (Original) The device-readable medium of claim 7 wherein the pre-designated condition is a surge in traffic across the primary interface at the first router in the IP network.

12. (Currently Amended) An Internet Protocol (IP) router comprising:
a plurality of interfaces including at least one primary interface and a spare interface providing connectivity through a re-configurable transport network to a spare interface on a second router in an IP network, wherein said spare interface is connected to said spare interface on said second router in the IP network upon receiving a signal indicating a pre-designated condition in the IP network; and
~~a routing table that, upon receipt at the router of a signal indicating a pre-designated condition in the IP network, is reconfigured so as to switch traffic designated for a primary interface at the router to the spare interface at the router, thereby causing the traffic to flow across a spare capacity on the re-configurable transport network between the spare interface on the router and the spare interface on the second router in the IP network.~~

13. (Original) The router of claim 12 wherein the pre-designated condition is a failure in the primary interface at the first router in the IP network.

14. (Currently Amended) The router of claim 13 wherein the primary interface provided connectivity to the re-configurable transport network before said failure and wherein the spare interface provides 1:N interface protection.

15. (Original) The router of claim 13 wherein the primary interface provided connectivity over a direct point-to-point link and wherein the spare interface

provides dynamic establishment of a new IP link in response to the failure.

16. (Currently Amended) The ~~device readable medium router~~ of claim 12 wherein the pre-designated condition is a surge in traffic across the primary interface at the first router in the IP network.